

“Riveting Reading”

**Civil Air Patrol
North Carolina Wing
Aircraft Maintenance**

Jan '22. Vol #50

By Lt Col Martin ‘Stryker’ Heller



‘Changing of the Maintenance Guard.’

‘Rich Gwin – Owner & Chief Aircraft Inspector of Cape Fear Air Works (KSUT) has retired and sold his business to Chris Whittle from Elon Aviation - KBUY. All of his staff will remain with the new ‘Brunswick Air Works.’ NCWG is working with NHQ to continue to use KSUT as one of our consolidated aircraft facilities.

To: NCWG Commanders, Operations Officers, Crew Chiefs & Aircrews;

1. Motivational Quote: *“The bureaucracy is expanding to meet the needs of the expanding bureaucracy.” Oscar Wilde*

1a. NCWG Director of Operations (NCWG/DO) Comments: To celebrate our survival through 2021, here are my most earnest resolutions for the new year.

1. I will schedule and complete (early?) my F5 or F91 before it expires, knowing that HQ cannot fund it beyond expiration. I will even take the time to practice the maneuvers on a regular basis.
2. I will always speak to my FRO at least 24 hours ahead of my flight verbally to ensure continual coordination, making sure I have a release, verbally or digitally, per the regulation.
3. I will check the air pressure in my aircraft's tires only on the first sortie of the day, keeping in mind that I have to have a source of air to replace any released. All other log entries can show N/A.
4. I will always close my windows before start and runup, as duct tape is unsightly, and should be unnecessary.
5. I will land with my feet on the floor, and not on the brakes, demonstrating smooth deceleration and slow turns, showing appreciation for the only (correct) contacts I have with our beloved planet. I will avoid wheel pinning turns just to clear the runway at the closest taxiway.
6. I will clean post-inspect my assigned aircraft, as flying is a privilege, and I am no better than anyone else, having respect for my fellow aviators, aircrew, and crew chiefs.
7. And finally, I will not be afraid to speak up as I am a member of the best damned Wing in the country, regardless of how much email and reminders I have to pour through.

Thank you for an entertaining and informative 2021. Stay safe and sane....Lt Col Urbanek 🧡

1b. NCWG Director of Stan/Eval (NCWG/DOV) Comments: "Happy New Year to All and Fly safely in 2022."

1c. Dec Highlights: NCWG big push was the 10-12 Dec Orientation Ride weekend but weather wasn't cooperating. For the month, NCWG flew ~**340 hrs**: about 80 hours shy of Novembers' 420 hours. These numbers might be a little low as this report is being pushed a few days early.

1d. Top Hour Flying Aircraft/Squadrons: **NC-145/KLHZ** takes top honors with at least 40 hours on **N938CP** and another 26 hours on **N7360C**. **NC-019/KAVL** is always impressive with 32 and 30 hours on **N963CP** and **N99885** respectively. Other impressive hours include: **N741CP (28.5)**, **N716CP (28)**, **N179CP (25.4)** and **N819CP (20.8)**.

1e. Top (Hours) Pilot for December: **Lt Greg Brown/NC-145** --18 hrs; **Capt Cliff Herring Jr/NC-171**--13.4 hrs; and **Lt Col Richard Netherby/NC-145** --12.7 Hrs. **The Top ‘C’ Hours pilots were:** **Maj Anthony Green/NC-169**--6.3 hrs, **Col Edward Angelovich/NC-001**--5.6hrs and **Capt Karl Noffke/NC-170**--5.4 hrs.

2. Maintenance Month in Review: The big news is that **Cape Fear Air Works (KSUT)** has been sold to the owner of **Elon Aviation**. We have temporarily stopped maintenance activities during the transition and subsequent accomplishment of CAP paperwork. One more positive aspect is we hope to have limited support at KBUY for oil changes and such. We wish Mr. Rich Gwin and his wife Barbara, much happiness in their well-earned retirement. He and his shop have personally been responsible for the great condition of the NCWG aircraft fleet.

2a. Aircraft in Annuals: N7360C. Lola had corrosion control done. And was venting an unusual amount of oil on the belly from the blow back tube. Some touch up paint was done where paint is missing or rust is beginning to show (wings, wing struts, landing gear struts, pax door step). Replaced missing screw on tail. Replaced missing screw on back plate on the right rear pax seat. Lubricated stiff rear pax seat roller. Replaced INOP nav lights with led bulbs. Replaced the clock.

Five other aircraft are projected for annuals in January including **N262CP, N179CP, N741CP, N908CP, & N963CP.**

2b. Other Maintenance Issues: Oil changes included: **N99885, N819CP and N938CP.** **N963CP** needed its nose strut serviced. **N99885** reported an intermittent strobe (aren't they all?) – turned out there are two different strobe systems that don't flash in synchronization. Also, the avionics fan stopped working; ended up being a loose grounding pin. **N819CP** needed a new tire, and a new Rosen. **N7360C** had a vacuum failure, electric trim issues, and its beacon failed. **N98426** had an electrical issue; turns out the O-ring terminal lug broke.... Glad it wasn't a battery, alternator, or both. **N716CP's** right strobe was acting up again and being replaced at home station.

3. Aviation Maintenance Support Information:

3a. NHQ CAP/LG Makes the 'Nice' List: If you haven't been paying attention, the HQ Elves have really produced a lot this year. From gifting CAP pilots, 'Foreflight Pro' to the rewrite of CAPR 66-1 (now CAPR 130-2) they were busy. NHQ/LG also developed maintenance continuity in CAPM 130-2 and CAPP 130-3. They're working on an aircraft maintenance officer specialty track, moving the W & B calculator to Foreflight, and of course, have funded all our requests and repairs. Yes, there was the AEROnet hiccup, but overall, it's been a very productive year. You might think they owed us an aircraft (they do), but they tried to give NCWG a new C-172. It just didn't fit in our stocking; as it was too small. NCWG needs a C-182 to meet all our missions (& perhaps the results of all that Carolina BBQ with a side of Mac and Cheese). Just wanted to give thanks, where due & our National counterparts really shined this year.

3b. AIF Updates: Gen Phelka, CAP's National Commander, announced that since the start of FY21, CAP has been credited with 128 saves. Perhaps as part of the appreciation, his staff thinned out the Aeronautical Information File (AIF). The new version is less than half as thick since anything available on-line isn't in the AIF. Instead of punishing crew chiefs with yet more page changes, Santa's Louisburg-based Elves printed & compiled complete replacements. Thus, crew chiefs can sell their aircraft's old AIF on eBay, or maybe reward it to a deserving squadron member. We'll figure out how to distribute the new AIFs soon. If you want to get a preview of the new AIF, here is the CAP link: https://www.gocivilairpatrol.com/media/cms/S_072004_Aircraft_Information_File_BFEF6EC0763E1.pdf



3c. CO Detectors: The new cards were mailed to crew chiefs on 20 Dec 21. Considering we're supposed to check them every flight, its humorous to learn that some might have been missing for a while. Where does it say, review before each flight? Two points if you knew 'AIF Front Cover.' Get yourself a life if you also knew it's in CAPS 73-2, para 3.2. right next to where it says to check air pressure first flight of the day. Remember to update AMRAD once the new CO detector is installed if you haven't already.

3d. NCWG Aircraft Maintenance Supplement: (Repeat) **NCWG Supplement 1 to CAPR 130-2** is already deep in coordination and **will replace the NCWG Sup to CAPR 66-1** in Tab 12 of the AIF when published; (*again*) perhaps next month. I would like to thank Lt Col Shelly Gonzales for assisting in the coordination. We hope to announce soon.

3e. Aircraft Logbooks new location(s): *(Repeat)* Remember, logbooks are not to be kept in the aircraft anymore unless the airplane is on the way to maintenance. If not already done, Crew Chiefs will document where they 'hid' the aircraft logbooks in the remarks section on the aircraft's AMRAD Information/Update page.

3f. GPS database current cycle (2113) started 29 Dec. And the CAP transition to FlyGarmin database distribution system (from Jeppesen Distribution Manager) seems to be going well. If you have questions/concerns, contact Lt Col Ray Davis, who, among others, is both our subject matter expert, and kind individual that allowed me to delegate this to him. If you're not sure what I'm talking about, re-read the Dec 2021 Riveting Reading for details.

3g. NHQ is transitioning the Weight and Balance program from the Wing website to Foreflight. *(Repeat)* We sent in our data on 3 Nov. Capt Brian 'Bear' Mouat NC-160 is actually programming this in for NHQ. Standby for news.



The new aircraft log has a place for the first flight of the day pressure #'s.

3h. Checking Tire Pressure: The first flight of the day tire pressure check requirement is not new and published in CAPS 73-1, Para 3.2. for ~16 months. We've also beat up our pilots as NCWG had a previous write-up on tire pressure. **What's new is documenting the pressure on the new aircraft hours log.** The good aspect is it forces you to take a close look at the tires. If you see a flat spot, it can be noted (instead of absorbing the blame). NHQ spends a lot of money replacing tires early and is trying to find ways to reduce that cost. I've been in contact with Michelin Tire company and they preach daily tire pressure checks. I believe it's due to flying in footgear (read: Boots) where one can't feel the brake pedals. Please fly with your heels on the floor. One can't lock the brakes if one is not pressing on them.



3h.1. NCWG Operations staff are looking at alternative methods to reduce tire replacements. One idea is to have maintenance induce air in the brake lines so the brakes are less sensitive. Another idea is to issue Mission Observers a truck tire baton. Not only can they check the tires, but they can provide motivational taps to a pilot's knees for landing on the brakes, or squealing to make the taxiway turnoff, perhaps opening the pilot window in flight, or using the 'fuel step, on the wing strut.' Remember the law of intensity; the most vivid (or painful) is the best remembered. After all, learning is knowledge that results in a change in behavior.

3i. Clean Machines: NC-022 was quick to announce washing N726CP in early December. According to AMRAD, the dirty birds overdue for a wash include: N819CP and N99832. When updating AMRAD, include both the completed, and next due dates.



N437BA, our L23 glider was professionally washed and waxed mid-December to remove some of the oxidation on the airframe.



3j. Aircrews Should Get a NCWG Driver's License: A reminder that if your aircraft gets caught off-station due to maintenance, weather, crew day, etc... your first option is to grab a CAP vehicle (nearly at all our locations) but you can only drive it if you have a CAP NC drivers license. See atch 1 for instructions.

3k. WMIRS Shortcuts: For those pilots that don't know (or remember), the computer folks at NHQ built in a capability to reduce your typing redundancy. And they share these shortcuts on their website at: <https://www.gocivilairpatrol.com/programs/emergency-services/aircraft-operations>. Actually, it's a helpful website for lots of continuity, training manuals, devices and other resources.

3k.1. WMIRS Tricks - ORM only once: If you're piloting several sorties, thus creating several sorties, you don't need to enter the ORM for each one (flown on the same day). Just create the ORM for the first sortie, but make it the worst-case scenario. (e.g., if you're flying 5 sorties for 11 hours, say so.) Then your FRO, could copy that ORM to the other sorties. It's the same for the FRO checklist, the FRO does it once and copies it to the other sorties. This allows the FRO to release them all that one time. Sorry people didn't know this before the orientation ride weekend. See screenshot on next page.

3k.2. WMIRS Tricks - Copying WMIRS Sorties: Another trick when making multiple sorties is to "not fall for the 'create x sorties' button". Instead, populate one sortie, including briefing information, and then 'copy x sorties.' WMIRS will ask you if you want the aircraft #, aircrew, and briefing data. You certainly want the briefing data. Again, it saves a lot of typing for orientation ride days, or AOB missions.

3k.3. WMIRS Tricks – Lesson Learned: We just learned you shouldn't copy a completed sortie. Not only does it void the release, but it dumps the original sortie debriefing data, and causes other problems.

ORM

Score: 5 (Low)
[Click here to update ORM](#)

NOTE: Paper ORMs can be entered in on the FRO Checklist.
[Copy ORM to each sortie below](#)

FRO Checklist

Status: **Complete**
[Click here to update FRO Checklist](#)

Flights to Release

Approve	Mission No/Sortie No	Pilot	Crew	Tail No	Aircraft Type	Sortie Type	Departure	Landing	Depart / Landing	Flight Plan	ORM Score	
<input type="checkbox"/>	22-A-3492 / A0497	Trull, Steven M (554591)		N179CP	C182/G1000	RELO	12/12/2021 13:30	12/12/2021 15:00	KSUT / KHBI	NONE	5 (Low)	Update ORM
<input type="checkbox"/>	22-A-3492 / A0498	Trull, Steven M (554591)	Cineros, Addison Maria (558754) / 9 Hunsucker, John Marvin (554575) / 99	N179CP	C182/G1000	ORIDE	12/12/2021 16:00	12/12/2021 16:40	KHBI / KTTA	NONE	3 (Low)	Update ORM
<input type="checkbox"/>	22-A-3492 / A0499	Trull, Steven M (554591)	Hunsucker II, John Marvin (554575) / 9 Cineros, Addison Maria (558754) / 99	N179CP	C182/G1000	ORIDE	12/12/2021 16:55	12/12/2021 17:45	KTTA / KHBI	NONE	ORM is not complete.	Update ORM
<input type="checkbox"/>	22-A-3492 / A0470	Trull, Steven M (554591)	Freeman, Nathaniel James (575502) / 9 Flores-Aguino, Francisco (575954) / 99	N179CP	C182/G1000	ORIDE	12/12/2021 18:00	12/12/2021 18:40	KHBI / KTTA	NONE	2 (Low)	Update ORM
<input type="checkbox"/>	22-A-3492 / A0471	Trull, Steven M (554591)	Flores-Aguino, Francisco (575954) / 9 Freeman, Nathaniel James (575502) / 99	N179CP	C182/G1000	ORIDE	12/12/2021 18:55	12/12/2021 19:35	KTTA / KHBI	NONE	1 (Low)	Update ORM
<input type="checkbox"/>	22-A-3492 / A0519	Trull, Steven M (554591)		N179CP	C182/G1000	RELO	12/12/2021 20:00	12/12/2021 21:30	KHBI / KSUT	NONE	0 (Low)	Update ORM



3i. NCWG Operations has positions open in the following areas:

- Wing Orientation Ride Coordinator (doesn't even need to be a pilot)
- Wing Aircraft Maintenance Officer (or assistant)
- Glider Operations Support (either as coordinators, tow pilots, or glider pilots). While the aircraft is based at KLHZ, it's a wing program, not just NC-145 responsibility.

4. Thank you all for the support & taking the time to read this Riveting Reading. All the Riveting Reading newsletters are available on the Wing website (NCWGAP.org) under 'Members/Operations/Aircraft Maintenance.' →→

- Stryker -

Martin Heller, Lt Col, CAP
 NCWG Aircraft Maintenance Officer

2. Attachments

1. How to get a NCWG Driver's License
- 2 'Humor Attempts' in past 25 RR Newsletters

NCWG Riveting Reading (50th Volume) (Attachment 1)

How to Get Your NC Wing Driver License

CAP Driver's License (Courtesy of the Shelby Squadron and Lt Col Kathleen Nicholas, NC-170)

Please follow these directions to obtain your CAP license. A helpful video on getting the CAP driver's license was produced by the Shelby Squadron - <https://www.youtube.com/watch?v=iP6uqOfYUKw>

1. Obtain your driving record from DMV and upload it to eServices along with a copy of your driver's license. Go to Operations Qualifications and under "Driver's License" click on Driver's License to bring up the page. Type in your CAP ID if requested. Complete all sections and upload your driver's license and driving record in the appropriate areas. Click on all vehicles you are able to drive including towing vehicles if that is something you can also do. If you have not uploaded anything to eServices before use the Shelby Squadron video on how to upload certificates and other documents to eServices - <https://www.youtube.com/watch?v=cFfUe1GmT5g>
2. Review [CAPR 77-1](#) – Transportation
3. Go to NC Wing Website - <https://www.ncwgcap.org>. If you have not registered to get a login click on "Register for an account" and follow the instructions.



Click on "Member Login" to get in the site.



After logging in click on "Professional Development" in the left hand column.

It will open a drop down menu as shown here Click on eLearning

When the next screen appears click on Vehicle Operator Training – view the slide show and take the test. After successfully completing the test, please email the your transportation officer and squadron commander that you have completed the process.



Approval will happen after the squadron commander's approval, group commander's approval and then finally NC Wing approval. If you do not see approval on your CAPF 101 Card within a week's time, please let your squadron's Transportation Officer know so it can be followed up.

NCWG Riveting Reading (50th Volume) (Attachment 2)

Humor Attempts in Past 2 Years.

Feb 2020: A Squadron Commander advised of a 'Catastrophic Vomit Bag failure' during AFROTC flights last weekend. Hazmat cleanup procedures were put into effect. The lesson is that many of these bags, whether stored in seatbacks, flight bags, or kneeboard pockets, might have been there quite a while, and their integrity could be compromised. We should take a look at all our preventative stock before we encounter another 'core breach of the regurgitation containment field.'

Mar 2020: N727CP had auto-pilot issues, forcing pilots to actually fly the airplane. I'm sure I'll hear from the NCWG CAP Pilot's union about that one.

Mar 2020: N99885's new LED replacement beacon bulb is so bright that not only does it reflect into the cockpit at night, but other airplanes are now pulling over to the right side of the airway to let 'Echo' pass. During its annual, maintenance painted the beacon light lens to block light.

Apr 2020: Due to strong passing winds, which would be uncomfortable to the passengers, most of the flights on Feb 29th were cancelled.

Apr 2020 Carbon-loaded Spark Plugs Sung to the tune of, 'Lean on Me.'

Some...times in our flights, we need full rich, to firewall the throttle, but if we are wise, it's too much fuel, for the engine to swallow.

Lean Me Out... When you're on the ground... and I'll be your friend; I'll help you carry on. For, it won't be long, when you're airborne, and you wished you would have leaned out.

Please, that red knob slide; since there are checklists -- you need to follow. One, must clean those plugs, if they load up, so there will be tomorrow.

You just call on me pilot, when you need a hand, we don't need full rich, so lean out. Loaded plugs will be a problem that you'll understand, we need to adjust the mixture to lean out.... "Bill Withers -- Song writer & Naval A & P

July 2020 In order to pay these two repairs (2018 N262CP and 2015 N726CP Garmin 1000 components) the entire NHQ/LG staff graciously forfeited their COVID19 stimulus checks. It was that expensive.



Aug 2020

3c. Tire Pressure: As a reminder, use your aircraft's tire pressure gauge to check the air. Since it's the same gauge that the inspectors will use, you'll want to make sure it works. If not, now is time to replace it. *This has been a public service message from the, 'Let's not get a three-pete writeup during our next inspection committee'. (LNG3WDNIC).*

Left: '**Lobster**' checks the left main wheel tire pressure on N405CV. Remember, if you need a hand, just ask. (No shellfish were injured in the shooting of this photograph.)

Sep 2020 Next, the throttle cable had slack...maintenance found & fixed...wait for it.... "A big nut loose in the cockpit."

And ... as newer C-182 Aircraft Operations Manuals' KOELs show it's a grounding item. Thus, strobe power supplies have become really hard to acquire and even Cessna has a technical alternative solution. While NHQ was trying to find/ship the approved alternative & installation instructions, Lt Milstead found a power supply. Armed with only a

screw driver and a flashlight, he located two on the airfield, got them to the maintenance shop, saving several hundreds of dollars and avoiding a possible weeklong grounding.

Oct 2020



Bearing & Race

“Race Relations:” Wait; keep your bearings – we’re talking about the gizzards which make the wheels on the airplane go round and round. Because CAP flies without pants, rain water gets into the bearings and races; resulting in rust. This is especially true when the airplane hasn’t moved in a while. So, when you’re at the airport, even on non-flying days, show the airplane who is boss and push it around a bit. It will help get the water out of the wheels and prevent some rusting.

Dec 2020 Editorial: Commanders: “The Middle Bun in a ‘Guano’ “Big Mac”

Jan 2021 December’s NCWG Top Left Seat time pilots (taller than 5’ 5”) were.... And NHQ, being more cautious {something about CAP Lives Matter} mandated checking and grounding/fixing affected aircraft.

Feb 2021



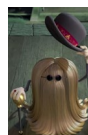
&



every



&



An Additional 12 minutes of Sardonic Educational Aviation Material: You may want to watch AVweb's Paul Bertorelli's piece on flying non-towered traffic patterns at: <https://www.funplacestofly.com/blog.asp?ID=3298> →→

Mar 2021 Also, the pilot seatback was re-supported & the loose dip-stick holder was tightened (these are actually two separate items).



April 2021 **CAP's 80th Anniversary (JA):** As part of the celebration, members from CAP's former 28th Coastal Patrol Squadron reenacted a mission which helped CAP earn the Congressional Gold Medal. Officials at the Kings Bay Naval Submarine Base were not amused. As a reminder CAP Reg 70-1, para 9.4.3. prohibits dropping items from aircraft unless to save a life. Shown is a modified, BDU-33, substance delivery device which could hold 10 protein bars, or 15, 12” Slim Jim meat sticks for such an effort.

May 2021 Editorial: **Weight and Balance: Do You Even Know That You're Lying?** CAP's online W&B program automatically pulls CAP senior members' weights from what they report in e-Services. But is that a *current weight*, a *former weight*, or a *desired weight*? ... I would suspect we'll start having tow bar induced, accident reports if we question our aircrews on their weight or make them step on a scale.

June 2021 The NCWG operations staff advised several concerns including the fact that both NCWG Forward Looking Infrared (FLIR) aircraft will be out of service at the same time. Undaunted, our FLIR-less leaders directed us to press ahead due to NHQ priorities.

Pilot Tip of the Month: Krispy Cream Donuts has an app that lets you know when the 'hot' light is on at your local shop. Honestly, with ~ 120 pilots, I was hoping someone would contribute something more substantial.

Sep 2021 During the 14 August National CAP Conference, CAP Director of Operations, John Desmarais broached the Aero-Net status. This program was initiated by the previous USAF Chief of Staff. Mr. Desmarais did admit, 'there are a

few hiccups.' I hope "they're not 'full belches' -- like the Hindenburg." 'There is more frustration of the Aero-net program across the NHQ staff and five affected wings than at a global climate change conference.

Nov 2021 AOB Restaurant PIREP: The Lumberton Great Tea and Bar-B-Que (LGTBBQ) Community Restaurant has closed. Not only was there a small cliental, but someone removed the restroom signs. Apparently, patrons didn't know which bathroom to use. AOB aircrews should plan to bring their own lunch as travel time really detracts from the mission.

Dec 2021 NHQ for the umpteenth time, believes that checking tire pressure will prevent flat spots and now wants us to log tire pressure on the aircraft flight log. It's been a special interest item on CAP/USAF inspections for the past ~twelve years. And unlike, USAF based, air pressure is not easily obtained (nor free) for some aircraft parked out on the ramp. Maybe this one isn't funny.....